



Attorney Docket: 027/43042
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: HERBERT DAMSOHN ET AL.

Serial No.: 08/743,002 Group Art Unit: 3743

Filed: NOVEMBER 1, 1996 Examiner: L. LEO

Title: HEAT EXCHANGER FOR COOLING EXHAUST GAS AND METHOD OF
MANUFACTURING SAME

REPLY

RECEIVED

Commissioner for Patents
Washington, D.C. 20231

JUN - 3 2002
TECHNOLOGY CENTER R3700

Sir:

In response to the Office Action dated February 26, 2002 (Paper No. 31), please amend claim 22 as follows. A marked-up version of this amended claim is included at the end of this Reply.

22. (Four times amended) A method of manufacturing a heat exchanger for cooling exhaust gas of an internal-combustion engine, said method comprising the steps of:

providing a plurality of rectangular tubes for guiding exhaust gas;

arranging a plurality of lugs in said rectangular tubes diagonally to a flow direction of the exhaust gas, in pairs, by one of (a) directly attaching the lugs to opposite walls of said tubes and (b) integrally forming the lugs from said opposite walls of said tubes;

providing first and second latticed tube bottoms;

welding ends of said rectangular tubes to said latticed tube bottoms such that said rectangular tubes form a bundle;

attaching a sheet metal jacket to said tube bottoms and around said bundle;

providing said sheet metal jacket with a coolant inlet and a coolant outlet to allow a liquid coolant to flow around said rectangular tubes in said sheet metal jacket; and

attaching connections to said tube bottoms, to ends of said sheet metal jacket, or to both said tube bottoms and ends of said sheet metal jacket, said connections being configured for attachment to an exhaust pipe communicated with the exhaust gas from the internal-combustion engine, each said connection defining a central opening for communicating said rectangular tubes with the exhaust pipe.